



#27

## SEQUENCE LISTING

RECEIVED

NOV 20 2002

TECH CENTER 1600/2900

&lt;110&gt; Yamamoto, H. et al.

<120> Plant Vde Genes and Methods Related  
Thereeto

&lt;130&gt; 15619/03/US

&lt;140&gt; US 09/075,375

&lt;141&gt; 1998-07-05

&lt;150&gt; US 08/747,574

&lt;151&gt; 1996-11-07

&lt;150&gt; PCT/US96/18291

&lt;151&gt; 1996-11-07

&lt;150&gt; US 60/023,502

&lt;151&gt; 1996-08-06

&lt;150&gt; US 60/006,315

&lt;151&gt; 1995-11-07

&lt;160&gt; 9

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 1981

&lt;212&gt; DNA

&lt;213&gt; Lactuca sativa

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (235)...(1653)

&lt;221&gt; transit\_peptide

&lt;222&gt; (235)...(610)

&lt;400&gt; 1

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 Ile Tyr Thr Arg Ser Pro Thr Leu Pro Glu Ser Ile Ile Pro Asn Leu  
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 Gln Lys Ala Ala Lys Ser Val Gly Arg Asp Phe Asn Asn Phe Ile Thr  
 355 360 365  
 Thr Asp Asn Ser Cys Gly Pro Glu Pro Pro Leu Val Glu Arg Leu Glu  
 370 375 380  
 Lys Thr Ala Glu Glu Gly Glu Lys Leu Leu Ile Lys Glu Ala Val Glu  
 385 390 395 400  
 Ile Glu Glu Glu Val Glu Lys Glu Val Glu Lys Val Arg Asp Thr Glu  
 405 410 415  
 Met Thr Leu Phe Gln Arg Leu Leu Glu Gly Phe Lys Glu Leu Gln Gln  
 420 425 430  
 Asp Glu Glu Asn Phe Val Arg Glu Leu Ser Lys Glu Glu Lys Glu Ile  
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 His Ser Asn Phe Leu Ala Asn His Glu Thr Ile Lys Tyr Tyr Val Gly  
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 Ser Lys Leu Pro Gly His Lys Arg Phe Ser Trp Gly Trp Glu Asp Tyr  
 25 30 35  
  
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 Phe Gly Ser Ile Val Val Ala Lys Ile Cys Ser Ser Arg Arg Ile Pro  
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 aga tac ttt cga aaa tct cct aga ata tgc tgt ggt ttg gat tca aga 248  
 Arg Tyr Phe Arg Lys Ser Pro Arg Ile Cys Cys Gly Leu Asp Ser Arg  
 55 60 65

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Ser	Ile	Asn	Gln	Asn	Val	Pro	Lys	Gly	Asn	Ser	Gly	Cys	Lys	Phe	Pro	
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Lys	Asp	Val	Ala	Leu	Met	Val	Trp	Glu	Lys	Trp	Gly	Gln	Phe	Ala	Lys	
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<213> Nicotiana tabacum

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Arg	Thr	Ile	Ile	Lys	Glu	Val	Glu	Glu	Ile	Glu	Glu	Glu	Val	Glu	Lys
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gga ttc tct aag ggg ata ttt gac att gtg cca tta cca tca aag aat 296  
 Gly Phe Ser Lys Gly Ile Phe Asp Ile Val Pro Leu Pro Ser Lys Asn  
 70 75 80

gag ctg aaa gag ctg acc gct ccg ctg ttg cta aaa ctc gtg ggt gtt 344  
 Glu Leu Lys Glu Leu Thr Ala Pro Leu Leu Leu Lys Leu Val Gly Val  
 85 90 95 100

tta gct tgc gcg ttc ctt att gtt cca tct gca gat gca gtt gat gca 392  
 Leu Ala Cys Ala Phe Leu Ile Val Pro Ser Ala Asp Ala Val Asp Ala  
 105 110 115

ctt aaa act tgt gca tgc tta ttg aag gga tgc agg ata gaa ctc gca 440

Leu	Lys	Thr	Cys	Ala	Cys	Leu	Leu	Lys	Gly	Cys	Arg	Ile	Glu	Leu	Ala		
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aag	tgc	att	gcc	aac	cct	gcc	tgt	gca	gcc	aat	gtc	gcg	tgc	ctt	cag		488
Lys	Cys	Ile	Ala	Asn	Pro	Ala	Cys	Ala	Ala	Asn	Val	Ala	Cys	Leu	Gln		
		135					140					145					
acc	tgc	aat	aac	cgt	cca	gat	gaa	acc	gag	tgc	cag	att	aaa	tgt	ggg		536
Thr	Cys	Asn	Asn	Arg	Pro	Asp	Glu	Thr	Glu	Cys	Gln	Ile	Lys	Cys	Gly		
		150				155					160						
gat	ctg	ttt	gag	aac	agt	gtt	gtt	gat	gag	ttc	aac	gag	tgt	gct	gtg		584
Asp	Leu	Phe	Glu	Asn	Ser	Val	Val	Asp	Glu	Phe	Asn	Glu	Cys	Ala	Val		
		165			170					175					180		
tcg	aga	aaa	aag	tgt	gtt	cct	aga	aaa	tct	gat	ctc	gga	gaa	ttt	cct		632
Ser	Arg	Lys	Lys	Cys	Val	Pro	Arg	Lys	Ser	Asp	Leu	Gly	Glu	Phe	Pro		
			185						190					195			
gcc	cca	gac	cct	tct	gtt	ctt	gta	cag	aac	ttc	aac	atc	tcg	gac	ttt		680
Ala	Pro	Asp	Pro	Ser	Val	Leu	Val	Gln	Asn	Phe	Asn	Ile	Ser	Asp	Phe		
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aac	ggg	aag	tgg	tac	att	aca	agt	ggc	ttg	aat	cca	acc	ttt	gat	gcc		728
Asn	Gly	Lys	Trp	Tyr	Ile	Thr	Ser	Gly	Leu	Asn	Pro	Thr	Phe	Asp	Ala		
		215					220					225					
ttc	gac	tgc	cag	ctg	cat	gag	ttc	cac	aca	gaa	ggt	gac	aac	aag	ctt		776
Phe	Asp	Cys	Gln	Leu	His	Glu	Phe	His	Thr	Glu	Gly	Asp	Asn	Lys	Leu		
		230				235					240						
gtt	gga	aac	atc	tct	tgg	aga	ata	aag	acc	cta	gac	agt	gga	ttc	ttt		824
Val	Gly	Asn	Ile	Ser	Trp	Arg	Ile	Lys	Thr	Leu	Asp	Ser	Gly	Phe	Phe		
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act	agg	tca	gcc	gta	caa	aaa	ttc	gtg	caa	gat	cct	aac	caa	cct	ggt		872
Thr	Arg	Ser	Ala	Val	Gln	Lys	Phe	Val	Gln	Asp	Pro	Asn	Gln	Pro	Gly		
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gtt	ctc	tac	aat	cat	gac	aac	gag	tac	ctt	cac	tat	caa	gat	gac	tgg		920
Val	Leu	Tyr	Asn	His	Asp	Asn	Glu	Tyr	Leu	His	Tyr	Gln	Asp	Asp	Trp		
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tat	atc	ctg	tca	tca	aag	ata	gag	aat	aaa	cct	gaa	gac	tat	ata	ttt		968
Tyr	Ile	Leu	Ser	Ser	Lys	Ile	Glu	Asn	Lys	Pro	Glu	Asp	Tyr	Ile	Phe		
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gta	tac	tac	cgt	ggg	cga	aac	gat	gct	tgg	gat	gga	tat	ggt	ggt	gca		1016
Val	Tyr	Tyr	Arg	Gly	Arg	Asn	Asp	Ala	Trp	Asp	Gly	Tyr	Gly	Gly	Ala		
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gtt	gta	tac	acg	aga	agt	tct	gta	tta	ccc	aat	agc	att	ata	cca	gaa		1064
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Leu Glu Lys Ala Ala Lys Ser Ile Gly Arg Asp Phe Ser Thr Phe Ile	
345 350 355	
aga acg gat aac aca tgt ggt cct gaa cct gcg ctc gtg gag aga att	1160
Arg Thr Asp Asn Thr Cys Gly Pro Glu Pro Ala Leu Val Glu Arg Ile	
360 365 370	
gag aag aca gtg gaa gaa ggt gaa agg ata atc gta aaa gag gtt gaa	1208
Glu Lys Thr Val Glu Glu Gly Glu Arg Ile Ile Val Lys Glu Val Glu	
375 380 385	
gag ata gaa gaa gag gta gag aag gaa gtg gag aag gtc ggt agg act	1256
Glu Ile Glu Glu Glu Val Glu Lys Glu Val Glu Lys Val Gly Arg Thr	
390 395 400	
gag atg acc ttg ttc cag aga ttg gct gaa gga ttt aat gaa ctg aag	1304
Glu Met Thr Leu Phe Gln Arg Leu Ala Glu Gly Phe Asn Glu Leu Lys	
405 410 415 420	
caa gac gag gag aat ttc gtg aga gag tta agt aaa gaa gag atg gag	1352
Gln Asp Glu Glu Asn Phe Val Arg Glu Leu Ser Lys Glu Glu Met Glu	
425 430 435	
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Phe Leu Asp Glu Ile Lys Met Glu Ala Ser Glu Val Glu Lys Leu Phe	
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Gly Lys Ala Leu Pro Ile Arg Lys Val Arg	
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Pro Ser Lys Asn Glu Leu Lys Glu Leu Thr Ala Pro Leu Leu Leu Lys	
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Leu Val Gly Val Leu Ala Cys Ala Phe Leu Ile Val Pro Ser Ala Asp	
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Ser	Gly	Phe	Phe	Thr	Arg	Ser	Ala	Val	Gln	Lys	Phe	Val	Gln	Asp	Pro
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	290				295						300				
Asp	Tyr	Ile	Phe	Val	Tyr	Tyr	Arg	Gly	Arg	Asn	Asp	Ala	Trp	Asp	Gly
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Ile	Ile	Pro	Glu	Leu	Glu	Lys	Ala	Ala	Lys	Ser	Ile	Gly	Arg	Asp	Phe
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Val	Glu	Arg	Ile	Glu	Lys	Thr	Val	Glu	Glu	Gly	Glu	Arg	Ile	Ile	Val
	370					375					380				
Lys	Glu	Val	Glu	Glu	Ile	Glu	Glu	Glu	Val	Glu	Lys	Glu	Val	Glu	Lys
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Val	Gly	Arg	Thr	Glu	Met	Thr	Leu	Phe	Gln	Arg	Leu	Ala	Glu	Gly	Phe
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Asn	Glu	Leu	Lys	Gln	Asp	Glu	Glu	Asn	Phe	Val	Arg	Glu	Leu	Ser	Lys
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